

IN THE CLAIMS:

Please cancel claims 1-37 without prejudice or disclaimer, and substitute new claims 38-74 therefor as follows:

Claims 1-37 (Cancelled).

38. (New) Architecture for monitoring quality of service in a telecommunication network comprising:

a set of terminals housing measuring agents which can be configured to interface with processes selected among processes for managing the application sessions of said network and processes for measuring the operating conditions of the network itself; and

a management and configuration subsystem comprising a scheduling module for scheduling quality of service measuring campaigns, capable of involving respective sub-sets of said set of terminals according to a set of identifying characteristics of the measuring campaign, said scheduling module being able to configure, for the purposes of the execution of said measuring campaigns, the measuring agents housed by the terminals included in said related sub-sets according to said set of identifying characteristics.

39. (New) The architecture as claimed in claim 38, wherein an additional subsystem is provided for managing the collection of measurement data, said additional subsystem comprising at least one of a database for storing said measurement data and of a processing centre for processing said measurement data.

40. (New) The architecture as claimed in claim 38, wherein said measuring

agents housed by the terminals of said set are configured to dialogue with homologous measurement and management agents.

41. (New) The architecture as claimed in claim 38, wherein at least some of the terminals of said set are mobile terminals.

42. (New) The architecture as claimed in claim 38, wherein said measuring agents are configured to perform operations selected from the group of:

conducting co-ordinated measurements on said telecommunication network,
performing local storage and pre-processing operations according to the processing conditions of said network, and
managing the transfer of the measurement results to said at least an additional subsystem for managing the collection of the measurement data.

43. (New) The architecture as claimed in claim 38, wherein said measuring agents are configured to conduct measurements selected from the group of:

measuring the quality and operating conditions of the radio access referred to said terminals,

monitoring end-to-end transport performance in real traffic,
monitoring end-to-end transport performance in artificial traffic,
measurements and processing on said terminals to produce quality of service indicators at the application layer, and

monitoring the operating conditions of the resources of said terminals and of said network.

44. (New) The architecture as claimed in claim 38, wherein said measuring

agents are configured to measure the load state of the terminal and/or of the network and to adapt the monitoring to the load state measured.

45. (New) The architecture as claimed in claim 38, wherein said management and configuration subsystem comprises at least a respective communication agent capable of interfacing with respective communication agents associated with said measuring agents housed by the terminals of said set.

46. (New) The architecture as claimed in claim 39, wherein said management and configuration subsystem comprises at least one respective communication agent capable of interfacing with one homologous communication agent comprised in said additional subsystem for managing the collection of the measurement data.

47. (New) The architecture as claimed in claim 38, wherein said management and configuration subsystem comprise an interface for interfacing with a user.

48. (New) The architecture as claimed in claim 39, wherein said additional subsystem for managing the collection of the measurement data comprises a respective communication agent configured to communicate with respective communication agents associated with said measuring agents housed by the terminals of said set.

49. (New) The architecture as claimed in claim 39, wherein said additional subsystem for managing the collection of the measurement data comprises a respective interface for interfacing said architecture with external systems.

50. (New) The architecture as claimed in claim 39, wherein said measuring agents housed by the terminals of said set are configured for the direct transfer of said measurement data to said additional sub-system for managing the collection of the

measurement data.

51. (New) The architecture as claimed in claim 38, wherein said measuring agents operate according to Jade technology.

52. (New) The architecture as claimed in claim 40, wherein said measuring agents dialogue with said homologous agents with a communication resource selected from the group of:

information transport by means of SMS,

TCP/IP transport, and

UDP/IP transport.

53. (New) The architecture as claimed in claim 38, wherein said scheduling module is configured to perform at least one operation selected from the group of:

defining the identifying characteristics of a measurement campaign,

identifying the terminals to be subjected to said campaign,

defining the measurements to be made and the quality of service indicators to be obtained,

defining the characteristics of the measurements to be made, and

defining the contextual information associated with the measurements carried out by said measuring agents.

54. (New) The architecture as claimed in claim 38, wherein, in order to identify said respective sub-sets of said set of terminals, said scheduling module is configured to carry out operations selected from the group of:

continuous search for the terminals meeting the identifying characteristics of the measurement campaign,
recording said terminals on an internal database,
creating a measurement profile with the information for conducting said measurements by a respective measuring agent,
activating the campaign on the involved terminals,
sending the measurement information collected from said terminals,
identifying the terminals subjected to changes of the relevant characteristics for the purposes of the measurement,
deactivating the campaign, and
deleting measurement profiles from said terminals and related information for the purpose of a determined measurement campaign.

55. (New) A method for monitoring quality of service in a telecommunication network comprising a set of terminals comprising the steps of:

associating to the terminals of said set measuring agents which can be configured to interface with processes selected among processes for managing the application sessions of said network and processes for measuring the operating conditions of the network itself, and

conducting quality of service measuring campaigns, capable of involving respective sub-sets of said set of terminals according to a set of identifying characteristics of the measuring campaign configuring, for the purposes of the execution of said measuring campaigns, the measuring agents associated with the

terminals included in said respective sub-sets according to said set of identifying characteristics.

56. (New) The method as claimed in claim 55, comprising the step of managing the collection of measurement data and providing at least one of a database for storing said measurement data and a processing centre for processing said measurement data.

57. (New) The method as claimed in claim 55, comprising the step of configuring said measuring agents associated with the terminals of said set to dialogue with homologous measurement and management agents.

58. (New) The method as claimed in claim 55, comprising the step of selecting at least some of the terminals of said set as mobile terminals.

59. (New) The method as claimed in claim 55, comprising the step of configuring said measuring agents to perform steps selected from the group of: conducting co-ordinated measurements on said telecommunication network, performing local storage and pre-processing operations according to the processing conditions of said network, and

managing the transfer of the measurement results to said at least an additional sub-system for managing the collection of the measurement data.

60. (New) The method as claimed in claim 55, comprising the step of configuring said measuring agents to conduct measurements selected from the group of:

measuring the quality and operating conditions of the radio access referred to said terminals,

monitoring end-to-end transport performance in real traffic,

monitoring end-to-end transport performance in artificial traffic,

measuring and processing on said terminals for the production of quality of service indicators at the application layer, and

monitoring the operating conditions of the resources of said terminals and of said network.

61. (New) The method as claimed in claim 55, comprising the steps of:

measuring, by means of said measuring agents, the load state of the terminal and/or of the network, and

adapting the monitoring to the measured load state.

62. (New) The method as claimed in claim 55, comprising the step of providing a sub-system for the management and configuration of the measurement campaigns capable of interfacing with said measuring agents housed by the terminals of said set.

63. (New) The method as claimed in claim 56, comprising the steps of:

providing a sub-system for the management and configuration of the measurement campaigns, and

providing an additional sub-system for managing the collection of the measurement data capable of interfacing with said sub-system for the management and configuration of the measurement campaigns.

64. (New) The method as claimed in claim 55, comprising the step of providing a sub-system for the management and configuration of the measurement campaigns capable of interfacing with a user.

65. (New) The method as claimed in claim 56, comprising the step of providing an additional sub-system for managing the collection of the measurement data configured to communicate with said measuring agents associated with the terminals of said set.

66. (New) The method as claimed in claim 56, comprising the step of providing an additional sub-system for managing the collection of the measurement data configured for interfacing with external systems.

67. (New) The method as claimed in claim 56, comprising the steps of:
providing additional sub-system for managing the collection of the measurement data, and

configuring said measuring agents associated with the terminals of said set for the direct transfer of said measurement data to said additional sub-system for managing the collection of the measurement data.

68. (New) The method as claimed in claim 55, wherein said measuring agents operate according to Jade technology.

69. (New) The method as claimed in claim 57, comprising the step of configuring said measuring agents for dialoguing with said homologous agents with a communication resource selected from the group of information transport by means of SMS,

TCP/IP transport, and

UDP/IP transport.

70. (New) The method as claimed in claim 55, wherein the step of conducting said measurement campaigns in turn comprises at least a step selected from the group of:

defining the identifying characteristics of a measurement campaign,

identifying the terminals to be subjected to said campaign,

defining the measurements to be made and the quality of service indicators to be obtained,

defining the characteristics of the measurements to be made, and

defining the contextual information associated with the measurements carried out by said measuring agents.

71. (New) The method as claimed in claim 55, wherein, in order to identify said respective sub-sets of said set of terminals, comprising steps selected from the group of:

continuously searching for the terminals meeting the identifying characteristics of the measurement campaign,

recording said terminals on an internal database,

creating a measurement profile with the information for conducting said measurements by a respective measuring agent,

activating the campaign on the involved terminals,

sending the measurement information collected from said terminals,

identifying the terminals subjected to changes of the relevant characteristics for the purposes of the measurement,
deactivating the campaign, and
deleting measurement profiles from said terminals and related information for the purpose of a determined measurement campaign.

72. (New) A telecommunication network comprising, monitoring architecture as claimed in claim 38, and associated with the network itself.

73. (New) The telecommunication network as claimed in claim 72, comprising at least an application server housing at least a measuring agent capable of interacting with said monitoring architecture.

74. (New) A computer program product capable of being loaded into the memory of at least one electronic computer and comprising portions of software code for implementing the architecture as claimed in any one of claims 38-54 or the method as claimed in any one of claims 55-71.